

## REMARKS

In the Office Action, claim 1 is rejected under 35 U.S.C. § 112, first and second paragraphs. Claims 1-12 are rejected under 35 U.S.C. § 102. In response, claim 1 has been amended. Applicants respectfully submit that the rejections have been overcome or are improper at least for the reasons set forth below.

In the Office Action, claim 1 is rejected under 35 U.S.C. § 112, first paragraph. The Patent Office essentially asserts that claim 1 contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, regarding claim 1 the Patent Office states, “it is confused that a communication line defined as one-way communication in the ‘unidirectional communication line’ is later the same line set for two-way communication in the ‘carrying out bi-directional communication.’”

Applicants believe this confusion is based on a simple misunderstanding of the description of the claimed invention. Claim 1 recites a communication method on the Internet using a uni-directional communication line. A first step in the method involves setting a route for an IP datagram to be transmitted to the uni-directional communication line at a transmitting side of the uni-directional line. The second step involves setting another route (i.e. another data path) for realizing a virtual communication route from a receiving side of the uni-directional communication line back to the transmitting side, thus making communication bi-directional between the two sides. The “virtual communication route” back from the receiving side to the transmitting side can be managed, for example, by a bridge type feed according to the claimed invention, which can virtually transmit the IP datagram backward to a uni-directional communication route thereby realizing bi-directional communication as supported in the specification, for example, pages 14-17. In view of same, one skilled in the art would clearly understand how to practice the claimed invention as defined by claim 1.

Accordingly, Applicants respectfully request that this rejection be withdrawn.

In the Office Action, claim 1 is rejected under 35 U.S.C. § 112, second paragraph. The Patent Office essentially asserts that claim 1 contains insufficient antecedent basis for several limitations in the claim. In response, this claim has been amended to address the informalities cited by the Patent Office.

Applicants note for the record that the amendments to claim 1 as discussed above are intended for clarification purposes, and further, Applicants do not intend to disclaim or narrow any subject matter in view of same. Based on at least these noted reasons, Applicants believe that claim 1 fully complies with 35 U.S.C. § 112, second paragraph.

Accordingly, Applicants respectfully request that this rejection be withdrawn.

In the Office Action, claims 1-12 are rejected under 35 U.S.C. § 102. More specifically, claims 1-12 are rejected as being anticipated by U.S. Patent No. 6,522,865 ("*Otten*"). The Patent Office alleges that *Otten* discloses each feature of the claimed subject matter as defined in claims 1-12.

At the outset, the current patent application claims priority under 35 U.S.C. § 119 of foreign patent application nos. P11-040336 and P11-042349 filed in Japan on February 18, 1999 and February 19, 1999, respectively. A certified copy of the priority applications was filed with the original non-provisional patent application and received by the Patent Office on February 17, 2000. On the other hand, *Otten* has an earliest effective prior art date based on its filing date of August 10, 1999. In this regard, the earliest effective filing date of the present application should antedate *Otten*, and thus, render *Otten* unavailable for use as prior art under § 102. Therefore, the anticipation rejection should be withdrawn for at least this reason.

Even so, Applicants believe that the claimed invention is distinguishable over *Otten*. Of the pending claims at issue, claims 1, 3, 5 and 9 are independent claims. Independent claim 1 recites a communication method on the internet using an unidirectional communication line comprising the steps of setting a route for receiving IP datagram to be transmitted to the communication line at a side for transmitting data to the communication line; and setting another route for realizing a virtual communication route from a receiving side to the transmitting side on the communication line, for carrying out bi-directional communication. Claim 2 depends from claim 1 and thus, as a matter of law, incorporates each of the features of claim 1.

Independent claim 3 recites a communication apparatus having first and second interfaces to carry out functions similar to those described above, namely a first interface for receiving IP datagram to be transmitted to the uni-directional communication line, and a second interface for realizing a virtual communication route from a receiving side to the communication apparatus on

the uni-directional communication line for carrying out bidirectional communication. Claim 4 depends from claim 3 and thus, as a matter of law, incorporates each of the features of claim 3.

In contrast to the claimed invention as required by claims 1 and 3, Applicants believe that *Otten* is deficient with respect to at least a number of features of the claimed invention. According the Patent Office, *Otten* discloses a communication method on the Internet using a communication from DBS station transmitting to MSS satellite that includes the steps of setting a route for receiving internet data using IP protocol (IP datagram) to be transmitted to the communication line at the side for transmitting data to the communication line at col. 5, lines 60-67, and setting another route for realizing a virtual communication route from the computer 1 (receiving side) to the MSS satellite to DBS station (transmitting side) on the communication for carrying out bi-directional communication at Figure. 1.

However, the cited reference along with the cited passage and Figure. 1 fail to describe the claimed invention. *Otten* teaches a hybrid satellite communications system having a satellite system and a terrestrial communications system and communication between them wherein a first set of signals (download signals) are of much higher frequency than the second set of signals (uplink signals). See, Abstract. Each set of signal frequencies corresponds to one of two receivers (i.e. DBS or MSS) associated with the satellite system. *Id.* Col. 5, lines 60-67, discusses the allocated frequency band of the hybrid communications system into two primary sub-bands 25 and 27. There is no discussion describing setting a route for receiving IP datagram to be transmitted to the communication line as the Patent Office alleges.

Furthermore, Figure 1 is also deficient with respect to the claimed invention. Although Figure 1 shows communications among the MSS and DBS satellites, ground stations and a home computer user, it fails to describe setting another route for realizing a virtual communication route from a receiving side to the transmitting side on the communication line for carrying out bi-directional communication as required by the claimed invention. For at least these reasons, *Otten* is distinguishable from Claim 1 and dependents thereof.

Further, *Otten* is distinguishable from claim 3 for substantially the same reasons as discussed above. In addition, although the Patent Office discusses col. 8, lines 25-30, as showing a first interface for receiving IP datagram to be transmitted to the uni-directional communication line at the DBS station, the passage only discusses that it would be less expensive for a user's

computer to communicate directly with a terrestrial node to transmit information or data to an Internet Service Provider. Consequently, *Otten* fails to describe a first interface for receiving IP datagram to be transmitted to the uni-directional communication line as required by claim 3 and dependents thereof.

Independent claim 5 recites a communication method comprising the steps of connecting a second communication line capable of bi-directional communication to bridge type transmitting means for transmitting data to a first uni-directional communication line, thereby virtually carrying out the bi-directional communication over the first communication line, and determining a destination of a packet inputted to the transmitting means through a predetermined interface, then determining which network the packet should be transferred to in accordance with the determined destination of the packet, and then transferring the packet through a predetermined interface only when transfer is necessary. Claims 6, 7 and 8 depend from claim 5 and thus, as a matter of law, incorporate each of the features of claim 5.

The Patent Office cites to col. 6, lines 5-35 and Figure 7 of *Otten* as allegedly disclosing the features of claim 5. However, the cited passage merely describes information transmission via frequency division multiple access, which does not require two-way synchronization and tracking. Thus, the cited passage does not disclose or suggest data communication over a bridge type transmitting means for transmitting data to a first uni-directional communication line as required by the claimed invention as the Patent Office alleges.

Furthermore, Figure 7 shows a block diagram illustrating a preferred embodiment of the hybrid satellite communications system including a plurality of terrestrial nodes. The terrestrial nodes operate in a similar manner to the MSS satellite and MSS ground station in that they relay uplink signals from the user's computer to an Internet Service Provider. See, *Otten*, col. 8, lines 15-21. However, Figure 7 does not disclose or suggest determining a destination of a packet inputted to the transmitting means through a predetermined interface, then determining which network the packet should be transferred to in accordance with the determined destination of the packet, and then transferring the packet through a predetermined interface only when transfer is necessary as alleged by the Patent Office. Accordingly, *Otten* is distinguishable from claim 5 and dependents thereof for at least these reasons.

Finally, independent claim 9 recites a communication apparatus comprising a bridge type transmitting means for transmitting data to a first uni-directional communication line, an interface connected to a second communication line capable of bi-directional communication, and control means for determining a destination of a packet inputted through a predetermined interface, then determining which network the packet is transferred to in accordance with the destination, and then executing transfer processing only when transfer is necessary. Claims 10, 11 and 12 depend from claim 9 and thus, as a matter of law, incorporate each of the features of claim 9.

The Patent Office cites Figure 1 and col. 8, lines 10-15, of *Otten* as allegedly disclosing the features of claim 9. As previously discussed, Figure 1 shows communications among the MSS and DBS satellites, ground stations and a home computer user. Figure 1 does not teach or suggest a bridge type transmitting means for transmitting data to a first uni-directional communication line and an interface connected to a second communication line capable of bi-directional communication. Furthermore, the cited passage nowhere addresses a control means for determining a destination of a packet inputted through a predetermined interface, then determining which network the packet is transferred to in accordance with the destination, and then executing transfer processing only when transfer is necessary as the Patent Office alleges. Instead, it only discusses that the separation of the TV signal and Internet signal can be accomplished by those skilled in the art without disclosing the manner or method that this would be accomplished. Accordingly, *Otten* is distinguishable from claim 9 for at least these reasons.

Based on at least these noted reasons, Applicants believe that *Otten* is distinguishable with respect to the claimed invention. Therefore, Applicants respectfully submit that *Otten* fails to anticipate the claimed invention.

Accordingly, Applicants respectfully request that the rejection of claims 1-12 under 35 U.S.C. § 102 be withdrawn.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of the same.

Respectfully submitted,

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